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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,392	12/05/2003	Dejan Radosavljevic	905-158 CON	9595
44564	7590	10/06/2005	EXAMINER KITOV, ZEEV	
BOND, SCHOENECK & KING, PLLC 10 BROWN ROAD, SUITE 201 ITHACA, NY 14850-1248			ART UNIT 2836	

DATE MAILED: 10/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/729,392

Applicant(s)

RADOSAVLJEVIC ET AL. 

Examiner

Zeev Kitov

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 - 34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 32 and 33 is/are allowed.
- 6) ☒ Claim(s) 1 - 7, 18, 21, 25 - 31, 34 is/are rejected.
- 7) ☒ Claim(s) 8 - 17, 19, 20, 22 - 24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

Examiner acknowledges a submission of the amendment and arguments filed on September 19, 2005. Applicant's Arguments have been given careful consideration but they have been found non-persuasive.

#### ***Final Status of Application***

Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 – 7, 18, 21, 25 – 31, 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Germain et al. in view of Dietz et al. (US 4,013,929).

Regarding Claim 1, Germain et al. disclose following elements: a fault detection circuit, which is inherently coupled to the plurality of line terminals and the plurality of load terminals, the fault detection circuit is being inherently configured to detect at least

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one fault condition (arc or ground fault); a power interruption circuit coupled to the fault detection circuit, the power interruption circuit (shown in Fig. 4) including a set of movable contacts (30 and 70 in Fig. 4) configured to decouple the line terminals from the load terminals in response to the fault detection circuit; a reset mechanism (element 78' in Fig. 5) coupled to the power interruption circuit and configured to actuate the movable contacts to re-couple the plurality of line terminals to the plurality of load terminals (col. 4, line 61 – col. 5, line 3); a lock-out mechanism coupled to the reset mechanism, the lockout mechanism being configured to disable the reset mechanism in a lock-out state (col. 5, lines 4 – 19); and a test circuit coupled to the fault detection circuit and the lock-out mechanism, the test circuit being configured to provide a simulated fault signal to the fault detection circuit in response to a user stimulus, the test circuit being configured to drive the lock-out mechanism from an unlocked state to the lock-out state if the fault detection circuit and/or power interruption circuit fails to respond to the simulated fault signal within a predetermined period of time (col. 5, lines 4 – 24). However, it does not disclose a plurality of load terminals.

Dietz et al. disclose a plurality of load terminals (elements 26, 27, 28, 29 in Fig. 19) being decoupled by power interruption circuit. Both references have the same problem solving area, namely providing the ground fault protection circuit. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the Germain et al. solution by using a plurality of switchable load terminals according to Dietz et al., because such mechanism will be able to move more than one contact, thus providing disconnection of more than one phase.

Regarding Claims 2 and 3, Germain et al. disclose a ground fault detection circuit and an arc fault detection circuit (col. 12, lines 39 – 50).

Regarding Claim 4, Germain et al. disclose a reset button (element 210 in Fig. 9); and a linkage mechanism coupled to the reset button, the linkage mechanism (elements 214 and 216 in Fig. 9 and 10) being configured to engage a portion of the movable contacts in a coupled state, the set of movable contacts being engaged to thereby couple the plurality of line terminals to the plurality of load terminals, the linkage mechanism also being configured to disengage the portion of the movable contacts (222a in Fig. 10) in a decoupled state, such that the plurality of line terminals are decoupled from the plurality of load terminals (col. 5, line 56 – col. 6, line 41).

Regarding Claims 5 - 7, Germain et al. disclose the reset mechanism including a latch (see Fig. 13g) coupled to the linkage mechanism and being configured to move the linkage mechanism from the coupled state to the decoupled state in response to a stimulus from the power interruption circuit (col.7, line 5 – col. 8, line 15). The latch is configured to move the linkage from the uncoupled state to the coupled state in response to a user stimulus of the reset button, when the test circuit is in the unlocked state (col.7, line 5 – col. 8, line 15). However, the latch cannot move the linkage from the uncoupled state to the coupled state in response to a user stimulus of the reset button, when the test circuit is in the lock-out state (col.7, line 5 – col. 8, line 15).

Regarding Claims 18 and 21, Germain et al. disclose a test switch (element 328 in Fig. 13b) responsive to a user stimulus; a first circuit element coupled to the test button, the first circuit element configured to generate the at least one fault condition in

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response to the test switch being in a closed position (Fig. 6b, col. 5, lines 4 – 19); and a second circuit element coupled to the test switch, the second circuit element being configured to drive the test circuit from the unlocked state to the lock-out state if the fault detection circuit and/or the power interruption circuit fail to respond to the at least one fault condition within the predetermined time period (col.7, line 5 – col. 8, line 2). As to differential current of Claim 21, the differential current flows through a current limiting resistor R (col. 5, lines 4 – 19).

Regarding Claim 25, Germain et al. disclose a spring-loaded mechanism (element 216 in Fig. 10) configured to actuate the set of movable contacts (222 in Fig. 10) from a coupled state to an uncoupled state.

Regarding Claims 26 and 28, Germain et al. disclose the reset mechanism driving the set of movable contacts from the uncoupled state to the coupled state in the unlocked state, but unable of driving the set of movable contacts from the uncoupled state to the coupled state in the lock-out state (Fig. 10c, col. 6, lines 7 –11).

Regarding Claim 27, Germain et al. disclose a relay mechanism configured to actuate the set of movable contacts from a coupled state to an uncoupled state (elements 218, 218a in Fig. 10).

Regarding Claim 31, Germain et al. disclose the device further including one of a receptacle (shown in Fig.8), switch (elements 30 and 70 in Fig. 4), circuit breaker (shown in Fig.8), module, and portable housing containing the device.

As per Claim 34, it differs from Claim 1 rejected accordingly by its limitation of the first and second circuit elements. Germain et al. disclose a first circuit element coupled

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to the test button, the first circuit element configured to generate the at least one fault condition in response to the test switch being in a closed position (Fig. 6b, col. 5, lines 4 – 19); and a second circuit element coupled to the test switch, the second circuit element being configured to drive the test circuit from the unlocked state to the lock-out state if the fault detection circuit and/or the power interruption circuit fail to respond to the at least one fault condition within the predetermined time period (col.7, line 5 – col. 8, line 2).

Regarding Claims 29, 30, Dietz et al. disclose a bus bar mechanism (contact carrier 35 in Fig. 7) actuating the set of movable contacts (elements 26 and 27 in Fig. 7) from a coupled state to an uncoupled state (col. 4, line 32 – col. 5, line 61). It further discloses driving the set of movable contacts from the uncoupled state to the coupled state in the unlocked state, but unable to drive the set of movable contacts from the uncoupled state to the coupled state in the lock-out state (col. 5, line 47 – col. 6, line 2). Both references have the same problem solving area, namely providing the ground fault protection circuit. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the Germain et al. solution by adding the bus bar (contact carrier) according to Dietz et al., because such mechanism will be able to move more than one contact, thus providing disconnection of more than one phase.

***Allowable Subject Matter***

1. Claims 32, 33 are allowed. A reason for that is that Claim 32 recites, inter alia, the test circuit being configured to open the fuse element. Such limitation was not found in the prior art of the record.
2. Claims 8 – 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. A reason for that is that the claims either recite the fuse mechanism participating in the mechanical actions of the circuit interrupter, or being dependent on allowable claims.
3. Claims 19, 20, 22 – 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. A reason for that is that the claims either recite the fuse mechanism (material being configured to fail) participating in the mechanical actions of the circuit interrupter, or being dependent on allowable claims.

***Response to Arguments***

1. Applicant in his Arguments attacks the Germain reference by alleging that it does not disclose the Claim 1 limitation of:  
  
(l) driving “the lock-out mechanism from an unlocked state to the lock-out state if the fault detection circuit and/or power interruption circuit fails to respond to the stimulated fault signal within predetermined period of time”.



Applicant alleges: "Germain teaches a test circuit that drives the lock-out mechanism from the lockout position to the unlocked position if the test passes. It does nothing, if the test fails" (page 4, lines 17 – 17). To support his allegation he recites Germain:

(II) "if the test fails, the latch 60' will not move in direction B and the notched conical tip 78b' of the reset plunger 78' will keep the plunger from going through the hole in the latch 60' and the device will be locked out from the reset function".

Comparison of the claim language (I) with the recitation (II) clearly shows that Germain's reference does teach this limitation of the Claim. Applicant is wrong alleging that Germain's invention "does nothing, if the test fails".

2. Regarding Claims 18 and 34 rejection, Applicant repeats the same allegation, which was addressed above.

3. Applicant attacks a motivation to combine the Germain and Dietz reference alleging that Dietz invention has different goals. The Dietz reference is used only to demonstrate a "plurality if load terminals", rather than one load terminal of Germain. Both references have the same problem solving area, namely providing the ground fault protection circuit and therefore they belong to analogous if not the same art. As to Applicant allegation that combination of references would render Germain circuit inoperable (since to save components, Dietz uses the main breaker), Examiner never suggested such bodily incorporation. In response to Applicant's Argument, it has been held that the test for obviousness is not whether the features of one reference may be bodily incorporated into the other to produce the claimed subject matter but simply

what the combination of references makes obvious to one of ordinary skill in the art. *In re Bozek*, 163 USPQ 545 (CCPA 1969).

**Conclusion**

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zeev Kitov whose current telephone number is (571) 272 - 2052. The examiner can normally be reached on 8:00 – 4:30. If attempts to reach examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (571) 272 – 2800, Ext. 36. The fax phone number for organization where this application or proceedings is assigned is (571) 273-8300 for all communications.

Z.K.  
09/30/2005



BRIAN SIRCUS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800